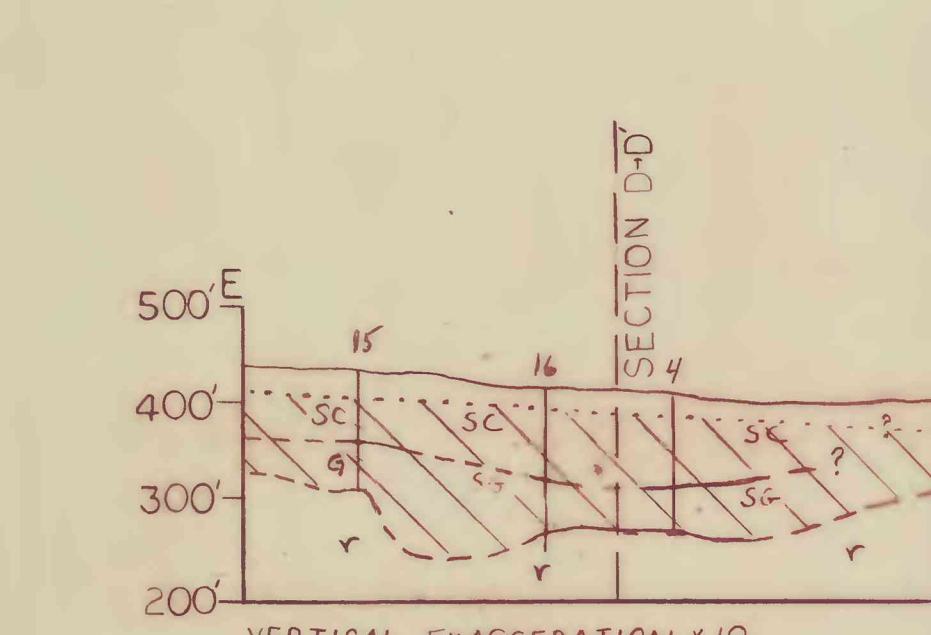
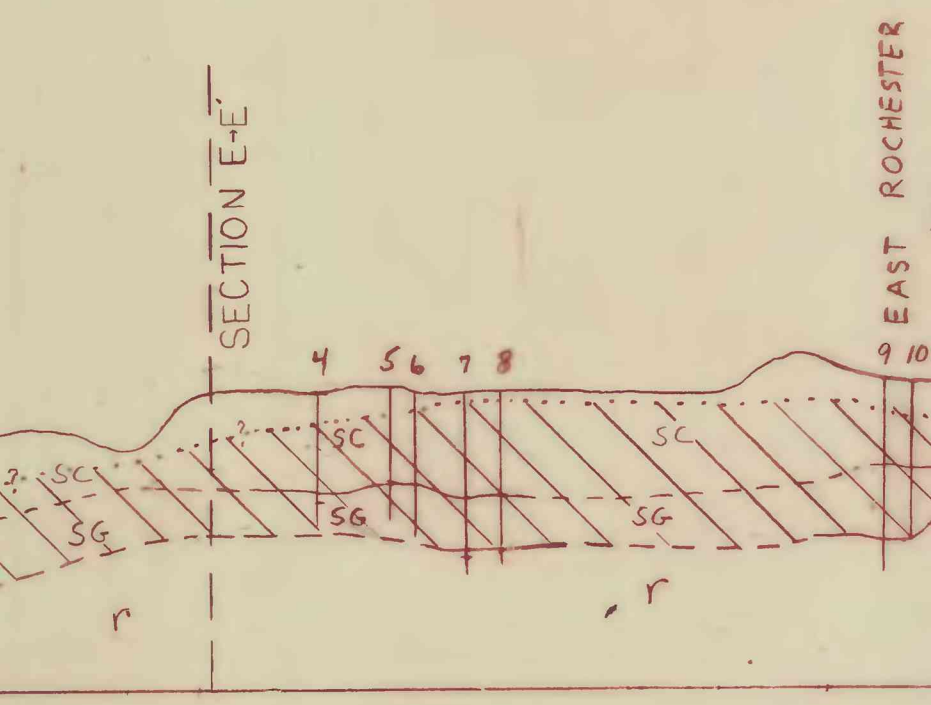
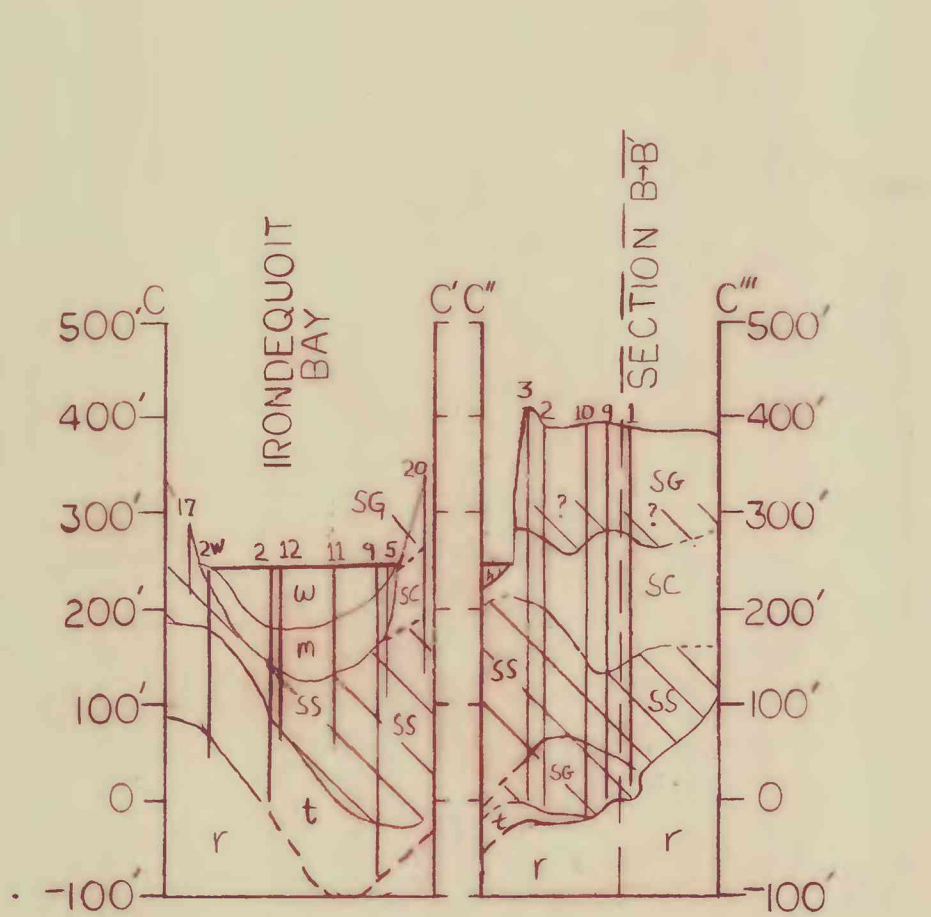
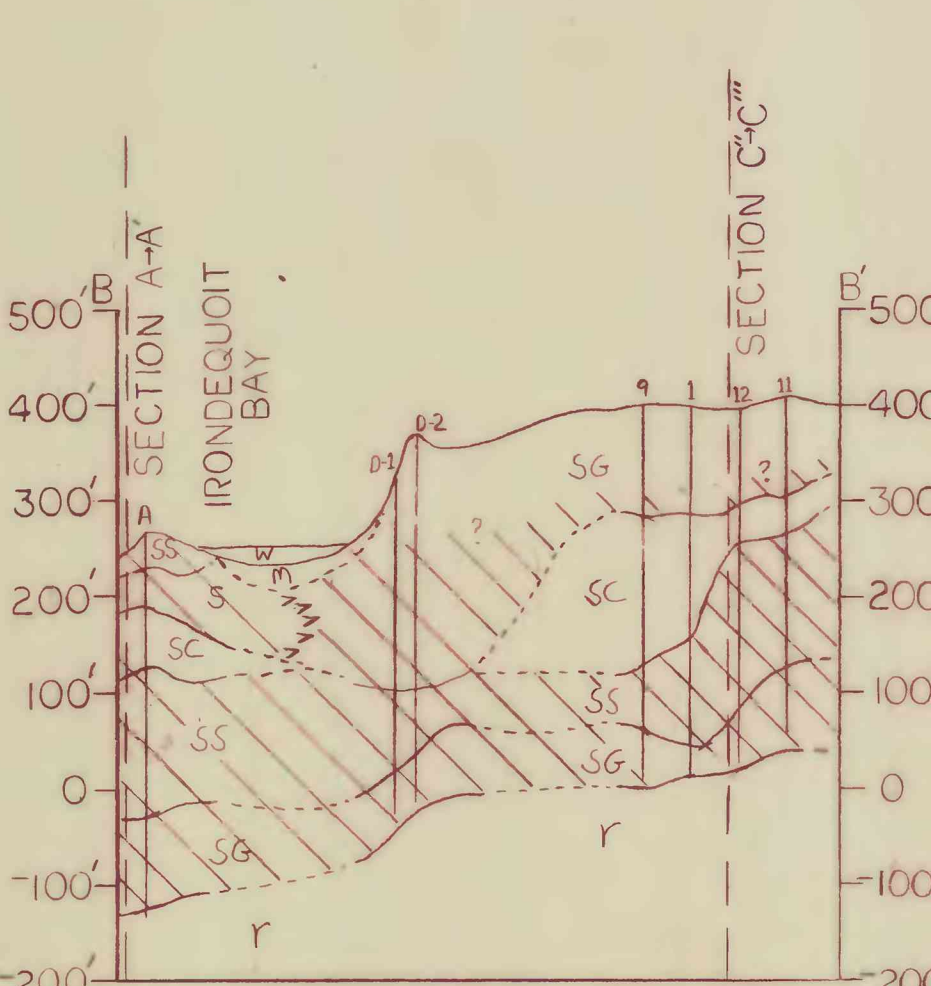
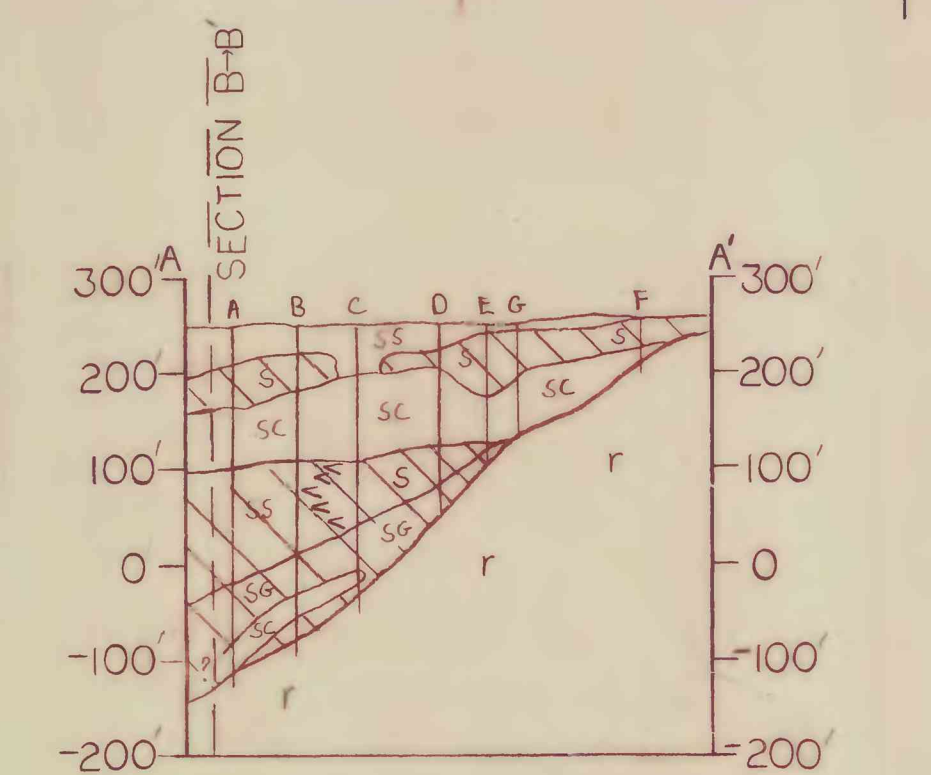
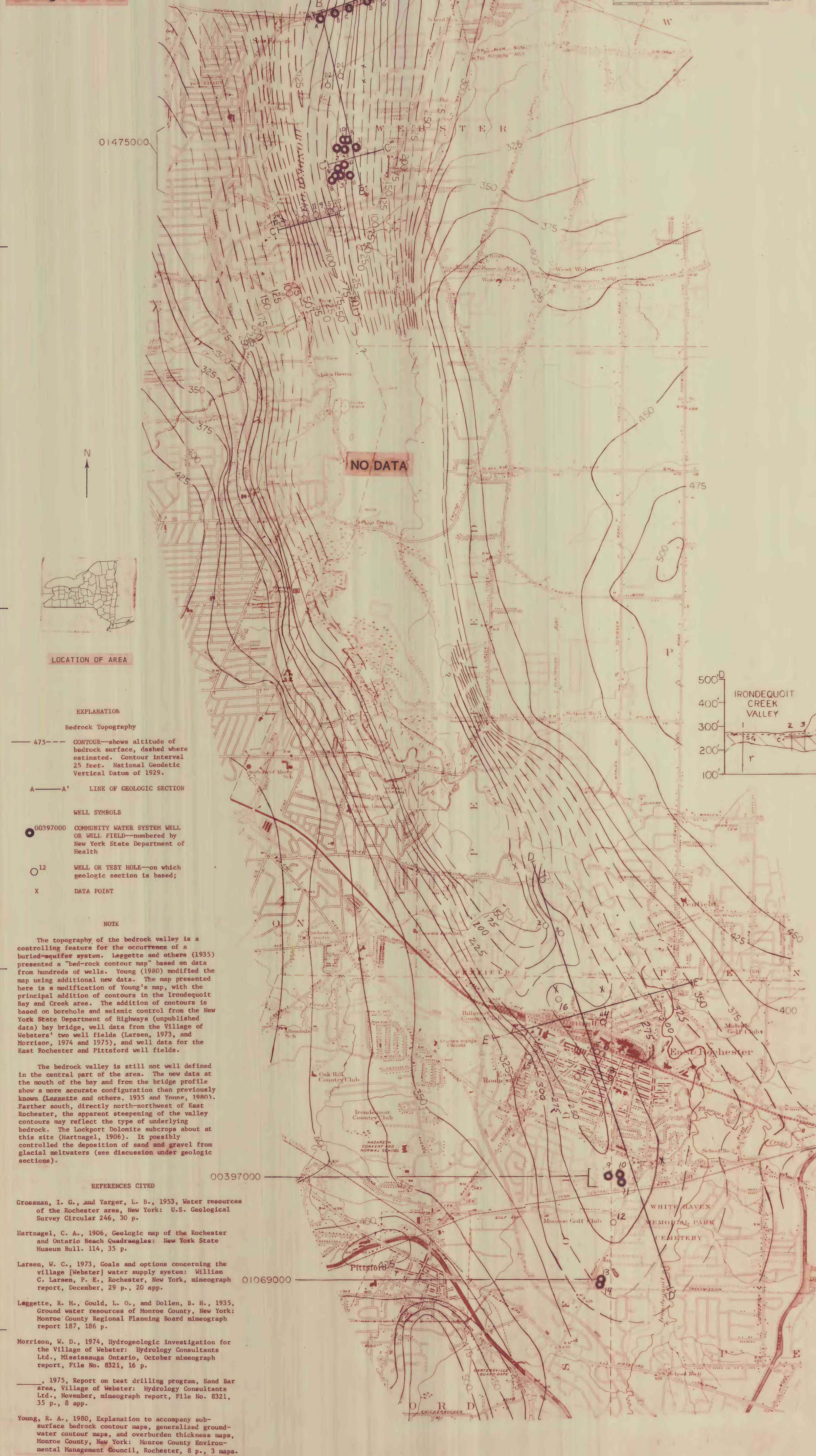


GENERALIZED BEDROCK TOPOGRAPHY AND GEOLOGIC SECTIONS

By Thomas J. Holecek, Keith I. Mahon,
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- EXPLANATION**
- Bedrock Topography
- 475--- CONTOUR—shows altitude of bedrock surface, dashed where estimated. Contour interval 25 feet. National Geodetic Vertical Datum of 1929.
- A—A' LINE OF GEOLOGIC SECTION
- WELL SYMBOLS**
- 00397000 COMMUNITY WATER SYSTEM WELL OR WELL FIELD—numbered by New York State Department of Health
- 12 WELL OR TEST HOLE—on which geologic section is based;
- X DATA POINT

NOTE

The topography of the bedrock valley is a controlling feature for the occurrence of a buried-aquifer system. Leggett and others (1935) presented a "bed-rock contour map" based on data from hundreds of wells. Young (1980) modified the map using additional new data. The map presented here is a modification of Young's map, with the principal addition of contours in the Irondequoit Bay and Creek area. The addition of contours is based on borehole and seismic control from the New York State Department of Highways (unpublished data) bay bridge, well data from the Village of Webster's two well fields (Larsen, 1973, and Morrison, 1974 and 1975), and well data for the East Rochester and Pittsford well fields.

The bedrock valley is still not well defined in the central part of the area. The new data at the mouth of the bay and from the bridge profile show a more accurate configuration than previously known (Leggett and others, 1935 and Young, 1980). Farther south, directly north-northwest of East Rochester, the apparent steepening of the valley contours may reflect the type of underlying bedrock. The Lockport Dolomite subcrop about at this site (Hartnagel, 1906). It possibly controlled the deposition of sand and gravel from glacial meltwaters (see discussion under geologic sections).

- REFERENCES CITED**
- Groesman, I. G., and Yarger, L. B., 1953, Water resources of the Rochester area, New York: U.S. Geological Survey Circular 246, 30 p.
- Hartnagel, C. A., 1906, Geologic map of the Rochester and Ontario Beach Quadrangles: New York State Museum Bull. 114, 35 p.
- Larsen, W. C., 1973, Goals and options concerning the Village [Webster] water supply system: William C. Larsen, P. E., Rochester, New York, mimeograph report, December, 29 p., 20 app.
- Leggett, R. M., Gould, L. O., and Dollen, B. H., 1935, Ground water resources of Monroe County, New York: Monroe County Regional Planning Board mimeograph report 187, 186 p.
- Morrison, W. D., 1974, Hydrogeologic investigation for the Village of Webster: Hydrology Consultants Ltd., Mississauga Ontario, October mimeograph report, File No. 8321, 16 p.
- , 1975, Report on test drilling program, Sand Bar area, Village of Webster: Hydrology Consultants Ltd., November, mimeograph report, File No. 8321, 35 p., 8 app.
- Young, R. A., 1980, Explanation to accompany sub-surface bedrock contour maps, generalized ground-water contour maps, and overburden thickness maps, Monroe County, New York: Monroe County Environmental Management Council, Rochester, 8 p., 3 maps.

BASE FROM NEW YORK STATE DEPARTMENT OF TRANSPORTATION
FAIRPORT, N.Y., 1968; MENDON PONDS, N.Y., 1968;
ROCHESTER EAST, N.Y., 1968; WEBSTER, N.Y., 1968. 1:24,000

EXPLANATION

- Geologic Sections**
- Open-water areas
- pm Peat, marl, muck, and clay; low permeability
- sc Clay, silt, and very fine sand; thin bedded to massive; low permeability
- ss Silt and sand, very fine; thin bedded; low to moderate permeability
- s Sand, fine to medium; well sorted; moderate permeability
- sg Sand and gravel; stratified; well sorted; high permeability
- t Till; unstratified silty and sandy clay with occasional pebbles, cobbles and boulders; scattered lenses of sand and gravel; low permeability
- r Rock (undifferentiated); sandstone, shale, and dolomite; low to moderate permeability depending on extent of cementation, solution, and fractures
- PRINCIPAL AQUIFER—extends upward into less permeable water-table aquifers
- GEOLOGIC CONTACT—dashed where approximately located
- WELL OR TEST HOLE—numbered as follows:

Section	Well/numbers from
A-A'	Morrison (1975)
B-B'	do; Village of Webster
C-C'	New York State Department of Transportation
D-D'	Village of Webster
E-E'	U.S. Geological Survey
	do

National Geodetic Vertical Datum of 1929

NOTE

The geologic sections, constructed through the principal well fields, are generalized to show the major water-bearing units. All wells are projected to the line of section. Well logs and sections were adapted from Larsen (1973) and Morrison (1974, 1975) for the two Webster well field areas. The western extent of the aquifer(s) is unknown (no control data) and the relation of the northern "two-aquifer" system to the southern "one-aquifer" system is uncertain. The southern area is considered to have a water-table aquifer (no confining units overlying it). In the north, at the bay mouth, two separate aquifer systems were recognized (Morrison 1974, 1975). An upper system was not, however, denoted at the DeWitt well field (C-C' section, sheet 2). The lower aquifer extends through both Webster well fields (see sheet 4). The authors believe that the southern part is hydraulically connected with both northern systems, which become separated by the intervening clay-silt unit, somewhere south of Irondequoit Bay. Water-level data (sheet 4) support this interpretation. Thickness of the units shown are believed to be representative of the aquifer—several tens of feet in each unit.

TOPOGRAPHY MODIFIED FROM YOUNG (1980); GEOLOGY MAPPED IN 1982